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1 any trace of oil residue?
2 A. Yes. We also ran cotton swabs on -- we
3 ran cotton swabs through there to look for any kind
4 of residue, we didn't find anything, except there was
5 some dust there, which is normal, but we didn't find
6 any residue of any oil of any kind.
7 Q. Please resume with your reading of that
8 maintenance note, please.
9 A. Okay. Found no engine oil leaks that
10 would contribute to any oil smell in the cabin. We
11 tested --
12 Q. And how did you determine there were no
13 engine oil leaks?
14 A. We removed cowlings, and we checked
15 everywhere that would normally, you know, all the
16 seals and anywhere in the area where it could
17 possibly be pulled into the intake -- into the intake
18 of the aircraft during operation.
19 Q. Okay. Go ahead and resume your reading,
20 please, on the maintenance note.
21 A. All right. We tested the compressor seal
22 per the instructions from the CD Aerospace. Both
23 engine's compressor pressures were normal. So no
24 evidence of possible by-pass of fumes into the cabin.
25 We inspected the air cycle machine, oil level, and

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1 found that it was at the same levels it had been 50
2 flight hours prior to this work.
3 Q. And what's the significance of that,
4 Mr. Probst?
5 A. Well, that means that -- and that's a
6 normal everyday check that the pilots do as well, is
7 to -- there's a cap there you can pull off and look
8 inside and see -- make sure the oil level is normal.
9 Because there is very little oil in there, so if that
10 would actually go down, it would -- the bearings in
11 that little air cycle machine would not last more
12 than a few minutes, probably seconds.
13 Q. Let me ask you this: If -- the fact that
14 it was at the same level it had been at 55 hours
15 earlier, does that indicate that you've got no
16 leakage in the ACM coil?
17 A. No. That would be a good indication that
18 the -- that the system is tight, yes. No oil leak.
19 Q. Go ahead and resume your reading of the
20 maintenance note, if you would.
21 A. Okay. We removed the duct work from the
22 mixing plenum to the ACM, air cycle machine. ACM to
23 cabin air plenum, cabin air plenum to the lower
24 forward cabin air distribution. No abnormalities
25 were noted. We replaced both plenum air ducts, part

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1 number IT-20124-128-6. Both ducts under the baggage
2 floor of the cabin, 8801-58-513, they were due to
3 leaks noted during the pressurization checks. They
4 were just old and brittle, and they were leaking.
5 And we replaced those.
6 Q. Let me stop you. Were they leaking
7 anything other than pressurized air?
8 A. No, just pressurized air. There's
9 actually, there's a duct inside a duct. The outside
10 part of the duct looked fine, but the inside duct
11 where it runs into the cabin after 30 years had
12 deteriorated and had some leaks in it. And it was --
13 Q. Okay.
14 A. It was preventing the cabin from -- the
15 whole system had to work harder to keep the
16 pressurization up because it was leaking in the back
17 of the aircraft. Once we changed those ducts, it was
18 much better.
19 Q. Okay. Please resume reading your note,
20 please.
21 A. Sure. Investigated why the cabin cooling
22 system wasn't functioning. Discovered that the hot
23 air valve was remaining in full open when temp
24 control system was in auto mode. There's two modes,
25 auto and manual, in the aircraft. You -- your pilot

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1 can control and decide which one he wants. The valve
2 was controllable in the manual mode. Replaced the
3 temp controller, HYLZ 50340, with an overhaul
4 controller, serial number 644. We also found the
5 upper and lower air inlet duct sensors were out of
6 calibration. We have readjusted both sensors to the
7 limits specified in the Commander, and worthiness --
8 I mean, Airfreight Maintenance Manual. Removed the
9 heat exchanger, clean, and pressure tested it for
10 leaks. No leaks were noted. Reinstalled the
11 original configuration. We removed the ACM, tested
12 function and rotor drag test on the bench. We found
13 the unit needed one-and-a-half pounds of torque to
14 rotate. Engineer was contacted at Fairchild, which
15 is the manufacturer of the unit, stated that any
16 reading under 10-inch pounds was sufficient. Further
17 inspected the unit, found no discrepancies, so we
18 reinstalled the unit in the aircraft. Pressurization
19 system was pressure checked for leaks, none were
20 found. Ground run of the temp control system
21 revealed the cool air system was now functioning.
22 The hot air valve was modulating normally. Grounds
23 and flight checks revealed the system was working
24 normally and no further odors was detected. And this
25 work was performed by one of my techs, was Kevin